University English Teachers' Teaching Competencies in China: A Literature Review

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Abstract

University English teachers in China comprise English as a Foreign Language (EFL) teachers for English-major students and College English (CE) teachers for non-English-major students in China. Teaching competencies of university English teachers have powerful effects on student learning and generally have several dimensions. However, there exist different taxonomies for the dimensions of teaching competencies. The purposes of this literature review are to first explore how researchers have defined teaching competency, secondly explore core dimensions of teaching competencies for the three teacher categories: university teachers, EFL teachers, and CE teachers, and finally investigate the differences in the core dimensions of teaching competencies between EFL teachers and CE teachers. Based on the core dimensions of each teacher category in the literature, the study concluded different three-dimension models of teaching competencies for university teachers, EFL teachers, and CE teachers. It found that CE teachers need to have an additional teaching competency in content knowledge related to their students' disciplines besides all the required competencies for EFL teachers. EFL teachers are recommended to develop their competency in English language knowledge to meet English majors' higher and intensive language needs. However, for CE teachers, although they don't have to be as knowledgeable as EFL teachers in the English language, it would be more challenging for them since they are supposed to gain knowledge of students' discipline which they might not have learned before.

Keywords: teaching competency models, core dimensions, university English teachers, EFL teachers, CE teachers

1. Introduction

English education has become increasingly important in China's higher institutions (Han, 2008; Li, 2014; Li, 2015). In 2021 there were 41.83 million undergraduates according to the survey made by the Ministry of Education (2021), all of whom are required to learn English. English as a Foreign Language (EFL) is learnt by English majors in their entire four years. College English (CE), a basic and mandatory course for all non-English-major students in China's colleges and universities, is learnt for 1-2 years and also plays an important role in developing students' language abilities as well as cultivating international talents for China (Shu, 2020). It is worth noting that in this review EFL teachers in higher education refer to the non-native English teachers lecturing English to English majors while CE teachers refer to the non-native English teachers lecturing College English curriculum to non-English-major students. The two teacher categories are called English teachers when added up as a whole.

Although English education has made a great contribution to cultivating international talents in China, English teachers in colleges and universities didn't equip themselves with adequate teaching competencies (TCs). Quite a lot of research studied TCs of EFL teachers or CE teachers by giving different definitions and dimensions in different models, however, the comparisons between TCs of EFL teachers and CE teachers are understudied.

The comparisons of the two teacher categories should be studied because the similarities in the two TC models may simplify the dimensions in the final TC model of all English teachers, making it convenient for the English teachers themselves to refer to and improve their teaching quality. Also, it becomes easier for educational administrators to assess English teachers' performance in a much clearer way.

This review tried to synthesize relevant literature and answer the following questions:

(1) What are the definitions of TC according to different researchers?

(2) What are the core dimensions of university teachers' TCs?

(3) What are the core dimensions of TCs for EFL teachers who teach English majors and those for CE teachers who teach non-English majors in China's higher education?

(4) Are there any differences in the core dimensions of TC models between EFL teachers and CE teachers?

2. Methodology

To identify relevant journal articles of TCs in university teachers, EFL teachers and CE teachers in China respectively, three of the main online databases were used with the time restriction between 2004 and 2023: CNKI in China, ERIC and WoS. The emphasis is, of course, more placed on CNKI in China because the study was to focus on EFL teachers and CE teachers in China's universities.

The search terms in ERIC and WoS included but were not limited to teacher competency, English teacher competency, teaching competence, university, and higher education. The search terms in CNKI were a little different. Because competence or competency is translated into not only *shengrenli,* but also other words like *sushi, nengli, nenglimoxing, nenglijiegou* in Chinese, more search terms were applied in CNKI. The Boolean operation and a second retrieval were performed in each of the three databases. Table 1 shows the search terms, searched publication types and article numbers in the three databases.

Table 1. Search Results in CNKI, ERIC and Web of Science

Database	Search term	Publication type	Number
CNKI	Chinese translations of English teachers, language teachers, EFL, College English, universities, and competence.	Journal articles in the Chinese Social Science Index (CSSCI)	196
	Chinese words include *sushi, nengli, nenglimoxing, nenglijiegou.*		
ERIC		Peer-reviewed journal articles with full text available in ERIC	27
Web of Science	English teachers, language teachers, EFL, College English, universities, higher education, competence, competency.	Journal articles in Social Science Index (SCI)	75
Total			298

To make literature eligible for review, the following inclusion criteria were adopted. First, only articles published in journals were included, rather than master's dissertations, doctoral dissertations, or research reports. Second, the education level was limited to higher education, and research in elementary education, secondary education, or high school was excluded. Third, all of the qualitative, quantitative, and theoretical journal papers were accepted only if they were collected in SCI, CSSCI, or peer-reviewed ERIC. Fourth, the articles should be focused on the overall TCs or the status of TCs. Those only on the sub-dimension of TCs were excluded. Finally, 151 articles were included for review, with 112 in CNKI, 8 in ERIC, and 31 in WOS.

3. Results

The answers to the four research questions are presented as follows.

3.1 Definitions of Competency and Teaching Competency

The terms "competence" and "competency" originated from enterprise management and have been blended up with the increase of the related research although they differ in some way.

White (1959) is credited with having introduced the term competence to describe those personality characteristics associated with superior performance and high motivation. Postulating a relationship between cognitive competence and motivational action tendencies, White defined competence as an "effective interaction (of the individual) with the environment" and argued that there is a "competence motivation" in addition to competence as "achieved capacity". McClelland (1973) followed this approach and developed tests to predict competence as opposed to

intelligence, but subsequently, he also described this characteristic of underlying superior performance as "competency" (McClelland, 1976), introducing the approach to the consulting firm that became Hay McBer (Le Deist & Winterton, 2005).

Different scholars all over the world present different definitions of competence/competency. In the USA, competency was defined as "underlying characteristics of people" (Boyatzis, 1982) that are "causally related to effective or superior performance in a job", "generalizing across situations and enduring for a reasonably long period" (Spencer & Spencer, 1993). In India, Vazirani (2010) proposed that the definition of competence/competency was one of the most bothering questions in business research wherein no possible agreement could be reached among the scholars. He wrote after reviewing 337 related articles that some researchers defined competence/competency as the skills, abilities and personal traits to be an effective or excellent manager. The definition included observable and measurable competencies, like knowledge, and skills, and also some less assessable ones related to personal traits or competencies.

Research indicates that levels of competence/ competency have a direct impact on job performance (Chen & Li, 2000; Peng et al., 2011; Zeng, 2007). In research on university teachers, an empirical study showed that there was a close positive correlation between university teachers' performance and all the three competency dimensions the study constructed (Lin et al., 2007). But research also showed different dimensions and elements of competence/ competency made different influences on job performance (Lu & Hong, 2007). While the goal of teaching is to facilitate student learning (Richards, 2010a), different dimensions and elements of teacher competence/ competency made different influences on students' achievements. For example, Lu and Hong (2007) stated that the development of teachers' monitoring competency promoted students' disciplinary capabilities, and significantly improved their academic achievements. In a study by Lin (2010), university teachers' professional knowledge competency made the greatest effect on students' achievements. Similarly, Jia et al. (2016) found that among other dimensions, the dimensions of personal traits and motivation for scientific research positively affected the work performance of teachers in research-oriented universities.

In sum, "competence" generally refers to the functional areas and "competency" the behavioral areas but gradually they have been used interchangeably (Vazirani, 2010). In China, attention paid to competence/competency began with the introduction of western educational learning theory at the end of the 20th century. When presenting Jerome S. Bruner's four learning principles of cognitive development theory, Shao Ruizhen (1982) introduced one term "drive for competency". In his view, students grow interested in what they are competent, satisfied with improving their surroundings and solving their problems. Drive for competency requires students' basic need for competency. Competence/competency research thus has been carried out in China since then.

Almost all the influential representatives in the competence/competency field in China have expressed their slightly different opinion on the definitions of competence/competency. One voice goes that competence/competency means potential and lasting personal attributes (e.g. what is in a person). For example, Wang and Chen (2002) investigated 220 top and intermediate managers using factor analysis and the structural equation method to find that the managerial competencies were underlying traits involving knowledge, skills, abilities and also values, personalities, and motivation. The competency model consisted of two dimensions: managerial traits and managerial skills. Similarly, Peng Jianfeng (2011) thought competency was a predictable and measurable collection of personal attributes which motivated employees to produce good job performance. Also, Song Peilin (2011) considered competence/competency to be the accumulation of knowledge, skills, abilities, and traits of good job performers when undertaking or accomplishing a task.

There exists another voice, however, emphasizing the behavioral characteristics of competence/competency which goes that competence/competency is clusters of related behaviors (e.g. what a person does). For example, Zhang Kai and Xiao Ying (2004) proposed that competencies indicated the behavioral and individual characteristics of good job performers which were predictable and task-orientated in a certain organizational environment and cultural atmosphere. Wang Shengqiao (2009) insisted that competencies were more a pragmatic thought of human resource management than personal traits related to job performance, which offered people a more explicit perspective to test and study competencies.

Additionally, some researchers defined competence/competency in its functional terms. To name a few, Chen Yansong adopted Behavioral Event Interviews, questionnaires and psychometric techniques to investigate university lecturers' competencies. He discovered that competencies for university lecturers consisted of three dimensions: occupational attitude, knowledge and skills, and personal charm (Chen, 2011). He Zongqi (2014) reviewed related literature on university lecturers' competencies in the last decade and concluded that the competencies of university

lecturers were related to whether they can perform their functions successfully; competency, therefore, is a comprehensive expression of professional knowledge, professional ability, professional values and personal characteristics. What's more, these characteristics can be measured.

From what has been discussed above, the definitions of competence/competency in China have fallen into three categories, some focusing on underlying personality traits, some on explicit behaviors, and some on functions. The commonalities lie in that competence/competency includes personal characteristics such as knowledge and skills. Just as Vazirani (2010) stated, people either use competence or competency to fit their own convenience. To be consistent, all through the article, the researcher herself tends to adopt the word "competency" to refer to "the characteristics of an individual that have been shown to drive superior job performance" (Le Deist & Winterton, 2005) and its plural form "competencies".

Synthesizing the literature above, the reviewer agrees with the most recognized definition from McClelland (1998) who suggested that competency distinguished outstanding employees from ordinary ones and it involved some effectively measurable motivation, traits, self-concept, attitude, value, knowledge as well as some identifiable behavioral demonstration of expertise. Teaching competency, therefore, is a collection of the potential characteristics and abilities needed in teaching involving some effectively measurable motivation, traits, self-concept, attitude, value, and knowledge as well as some identifiable behavioral demonstration of expertise.

3.2 University Teachers' Core Teaching Competencies

The most famous competency models in management probably are the iceberg model (McClelland, 1973) and the onion model (Boyatzis, 1991). With the continuous development of education and education reforms, the competency movement has gradually transferred from the field of enterprise management to the field of education involving studies of competency from educational learning theories to the administrative level. Conceptions of teachers' competency (TC) and good teaching differ from culture to culture (Tsui, 2009). In some cultures, especially that of Asia, a good teacher is to control and directs learners who passively absorb what the teacher lectures. Teaching is viewed as teacher-centred and controlled. But in other cultures, teaching is attached importance to individual learners' independent learning and creative thinking. Students are encouraged to question and challenge what they get from the teacher who mainly becomes a facilitator (Richards, 2010b).

The connotations of TC differ as time changes. In the 1950s it mainly emphasized the mastery of scientific knowledge thus Competency-based Teacher Education (CBTE) is developed, a kind of education focusing on the abilities teachers should possess. However, the education world soon found that the requirements for teachers went beyond mastering subject knowledge. In the 1960s and 1970s what was prioritized by a teacher was shifted from knowledge to emotional facets. That was when Human-based Teacher Education (HBTE) emerged which distinguished from CBTE for its highlight of teachers' independence (Joyce, 1975).

Similarly, it was not long before the scholars found that even the most popular teacher couldn't make it without knowing teaching content and skills. As constructivism developed, education theories have changed from teacher-centeredness to student-centeredness, which brings about new requirements for TCs. Students, positive and self-regulating learners, create meanings in a meaningful way from their own experiences. Teachers, instead of providing knowledge and information explicitly, are to motivate students' ability to construct knowledge in themselves. Research shows there is a positive correlation between teachers' TCs and teaching performance (Lin, 2010). However, at the same time, the different dimensions and the elements constituting TCs have different effects on education(Lu & Hong, 2007).

Generally speaking, TCs are more cognitive than emotional. An increasing number of schools put assessments of TCs into standardized tests which of course emphasize the cognitive dimension and the latest efforts in studying TCs still fit in the cognitive, not emotional framework.

In TC studies overseas, researchers tend to balance skills and qualities thus two research tendencies come up. One is for the skilled-oriented competency models with Charlotte Danielson (2007) as a representative. He stated that the teachers' competency model included four domains: planning and preparation, instruction, professional responsibilities, and classroom environment. The other is for the quality-oriented competency model. Olson & Wyett (2000) thought that TCs involved the professional knowledge, skills, and values possessed by individual teachers to successfully implement the teaching. With the development of the research on the competency movement, these two tendencies seemed to merge together. For example, Shinkfield & Stufflebeam (1995) believed that TCs could be divided into three categories: professional knowledge, professional skills or abilities, and professional attitude or values. Furthermore, they proposed that levels of competencies need different assessment methods. Bisschoff &

Grobler (1998) used a set of 108-item structural questionnaires to study aspects of TCs involving learning environment, teachers' professional commitment, discipline, teachers' educational background, reflection, collaborative ability, effectiveness, and leadership styles. They found the two-factor TCs model, which included educative competency and collaborative competency.

Earlier researchers on teachers' competencies in China often directly quoted foreign scholars. Xu Jianping (2001) defined TCs as individual potential characteristics that could distinguish good teacher performers from ordinary ones in school education and teaching. The potential characteristics included abilities, self-concept, motivation, personalities, etc. Based on McClelland's views, Xu Muxing (2010) claimed that TCs could be divided into basic competencies which were explicit professional knowledge and skills, and discriminating competencies which were implicit attitudes and values. Some even directly adopted McClelland's definition and model proposing that TCs were a set of potential personal characteristics including knowledge, skills, motivation, self-concept, attitude and values (Sheng, 2017).

With the research on TCs going deeper, Chinese researchers began to develop their definitions and models according to differentiated research goals. HuangYan (2013) thought that TCs for university teachers were a set of observable and measurable behaviors required in university teaching and research. This behavior, like professional knowledge, abilities, values and personality traits, was vital to individual growth and institutional success. Wang Cheng (2017) elaborated his views on TCs based on concepts of "Scholarship of Teaching", "Scholarship of Discovery", and "Scholarship of Application".

In terms of constructing TCs models in China's universities, researchers mainly focus on teachers' professional quality. In the early 21st century some scholars adopted behavioral event interviews and questionnaire surveys presenting several factors in TCs (Tang et al., 2010; Wang et al., 2006; P. Xu et al., 2018). Their factors were not the same ranging from four to seven while all fitted their own research questions.

Besides behavioral interviews and questionnaire surveys, other researchers used instruments like the Delphi method, analytic hierarchy process, etc. And the studies didn't limit themselves to general teachers. There were studies on engineering teachers, research teachers, teachers in minority schools and the like. The mainstream TCs of university teachers constructed in China are shown in Table 2. Several points are worth noting. First, all the university teachers in the studies refer to non-native English-speaking teachers because English is one of the foreign languages in China, some of whom have been educated overseas sometime in life (for example, for the master's degree or doctoral degree mainly in English-speaking countries). Second, present studies focus on TCs in different instructional settings, including the classroom setting, online setting, and blended learning setting. TC models in Table 2 are concluded in the classroom settings mainly.

Table 2. Representatives of University Teachers' TC Models in China (He, 2014)

Researchers	Research Instruments	Participants	Research Conclusions
Y. Wang et al (2006)	Behavioral event interviews, questionnaire surveys	690 university instructors in Guangzhou city including 47.8% science and engineering instructors, 43.3% liberal arts instructors, and 8.8% other instructors.	University TCs includes 7 domains: creativity, ability to absorb information, interpersonal understanding, responsibility, ability to establish a relationship, thinking ability and achievement orientation.
Yao (2008)	Questionnaire surveys	200 university instructors and 160 undergraduates in Changsha city.	University TCs includes 7 dimensions and 33 indicators: personal characteristics (responsibility, confidence, integrity, stable emotion, self-evaluation, acuity, perseverance, optimism); developmental characteristics (entrepreneur, self-development, creativity, learning ability, ability to collect information); working attitude (professional values, sacrifice, patience, loving teaching, course proficiency); teaching skills (expression, power, classroom controlling, practice ability); professional

Researchers	Research Instruments	Participants	Research Conclusions
			skills (knowledge base, research ability); concerns about students (understand and respect students, care for students, responsibility for students); personal communication (teamwork, good listeners, coordination, effective communicators, easy-going, forgivingness).
Niu and Zhang (2012)	Behavioral Event Interview, O* NET job analysis	15 excellent and 9 ordinary university instructors in Guangdong city.	University TCs include 8 indicators: creativity, critical thinking, teaching strategies, attention, social service consciousness, logic and analytic ability, achievement desire, and respect for others.
Huang (2013)	Analytic hierarchy process, interviews, Delphi method	Over 3000 post-80s university instructors in 31 provinces.	University TCs include 5 dimensions and 19 indicators: education and teaching competencies (teacher-student relationship, classroom teaching, practice and internship supervision, micro-teaching and thesis supervision, teaching improvement and research, students' achievements); scientific research competency (research programs and finance management, research outcomes and rewards, research cooperation and sharing); social service competency (engagement in university public welfare, engagement in public welfare of other social institutions, engagement in social academic service related to one's professional knowledge); teacher morality competency (political morality, professional morality, academic morality); quality development competency (knowledge, skills, physical and mental quality, of self-development consciousness and ability).
He (2015)	Delphi method, questionnaire surveys	23 expert interviewees in universities of 11 provinces and cities	University TCs include 4 dimensions and 11 indicators: knowledge literacy (pedagogical knowledge, content knowledge, general knowledge); teaching skills (teaching design, teaching implementation, teaching research and reform); professional morality (professional attitude, affection, pursuit); personal traits (self traits, interpersonal traits).
Liu (2018)	Delphi method, questionnaire surveys	319 instructors, administrators, graduates, and undergraduates in engineering universities	University engineering teachers' competencies include four characteristic groups: quality, ability, knowledge and personal traits.
Yang (2021)	Behavioral Event Interviews, text analysis, questionnaire surveys, a panel of experts	17 instructors in over 10 universities	University researcher teachers' competencies include 10-factor discriminating competency characteristics (concentration, diligence, pressure resistance, planning for goals, active learning, responsibility and commitment, perseverance, pride in achievements, problem awareness) another 12-factor basic competency characteristics (innovative thinking, adaptability, helpful and friendly teamwork, physical and mental health, interest, information literacy, further study, professional identification and preference, academic atmosphere, external rewards, professional knowledge base).

As for the dimensions of university teachers' TC models, researchers often start from the universal competencies which are found to exist among a variety of disciplines and subjects. These universal competencies are mainly investigated by three academic branches. The first branch goes with the idea that the TCs incorporate just three general dimensions: professional teaching skills, knowledge, and value. One of the representatives is Lin (2010b) who wrote in his book that university lecturers' TCs comprise personal value, professional knowledge, and teaching-related abilities. Under these dimensions, 36 indicators are listed as well.

The second branch, however, complements that university teachers' TCs should include their personal traits as well, so the second branch agrees that there are actually four general dimensions in university teachers' TCs (Zhao et al., 2020). For example, after conducting the Delphi method and questionnaire surveys, He (2015) concluded that TCs include 4 dimensions and 11 indicators: knowledge literacy (pedagogical knowledge, content knowledge, and general knowledge); teaching skills (teaching design, teaching implementation, teaching research and reform); professional morality (professional attitude, affection, pursuit); personal traits (self traits, interpersonal traits).

The third branch, based on the view of the second branch, adds the dimension of self-development up, which means there are five general dimensions: professional teaching skills, knowledge, value, personal traits, and self-development. Xie and Zhou (2010) divided civilian-run university teachers' TCs into knowledge quality, teaching ability quality, the value of commitment, and personal traits. With different wording and phrasing, the division falls into this branch of TCs.

3.3 EFL Teachers' Core Teaching Competencies

English has been one of the mandatory disciplines for all students in their freshman year, including English majors and non-English majors in China's higher institutions. Those whose students are English majors are called EFL teachers in this study and those whose students are non-English majors are called College English teachers because the course offered to non-English majors is College English. EFL teachers and CE teachers constitute university English teachers in China. In the study, the TCs of university English teachers as a whole are not the focus. Instead, TCs of EFL teachers and TCs of CE teachers are studied respectively to help figure out the differences between them.

For the studies on TCs of EFL teachers, Farrell (2015) first opposed the dichotomy between native English speaker teachers and non-native English speaker teachers and then pointed out that what matters most is not the ethnicity, culture or race of the EFL teacher, but what he knows in terms of effectiveness as a teacher regardless of background. The critical competency is reflective practice. Sysoyev & Evstigneev (2015) addressed the issue of EFL teachers' Information and Communication Technology competency followed by suggesting the components of this competency and describing a study to develop EFL teachers' ICT competency (Rogers-Sirin & Sirin, 2009). Several other researchers realized EFL teachers' ability to recognize ethical dilemmas related to intolerance in schools and they analyzed EFL teachers' intercultural competency from the perspectives of pre-service teachers or teacher development (Cushner & Mahon, 2009; DeJaeghere & Zhang, 2008; Sercu, 2006). Besides, the necessity of including the global dimension in the structure of EFL teachers' professional competency was substantiated (Meng et al., 2017; Orazbayeva, 2016; Semaan & Yamazaki, 2015).

In China research on university EFL teachers' quality or competency began in the late 1990s with a focus on studies of professional knowledge, skills and research ability (Dong, 1999; Li, 2001; Zhang & Wang, 2002; Zheng & Zhong, 1997). It was after 2005 that research went beyond knowledge and skills to implicit personal motivation, values and traits underneath with various research methods like the theoretical, qualitative, quantitative, or mixed methods (Wu, 2005; Zhan & Yan, 2015).

Lots of researchers studied the EFL teachers' competencies in non-empirical research which is a popular research method among China's academia. Zhong Weihe (2016) drew on the experience of foreign language teacher development at institutions of higher learning in the United States, Australia and the European Union, and proposed a competency framework for English teachers under national criteria. Shu Dingfang (2013) suggested some ways to develop EFL teachers' teaching involving reflective teaching practices, language proficiency, cultural competency, foreign language education theory, academic workshops, etc. A theoretical study elaborated on the constituents of EFL teachers' quality, that is, moral quality, professional quality and career quality based on the analysis of the current status of EFL teachers as well as the challenge they confronted in colleges and universities (Zhou, 2016). Zhao (2013) researched the three dimensions of language teachers' competencies: professional knowledge, professional skills, and professional ethics, and theoretically put forward suggestions as to how to develop language teachers' capabilities.

But still, some other researchers studied the TCs of EFL teachers using empirical research methods. One of the important research was done by Wu (2005) who investigated 213 teachers from 30 universities across China through questionnaires and interviews. A professional profile for effective university EFL teachers was outlined which consisted of four related dimensions: English language pedagogical content competency, view of the foreign language teaching profession and professional ethics, view of foreign language teaching and learning, and view of language teacher learning and development.

Studies on EFL teachers were carried out mainly in several courses, like the *Business English* course and *English Newspaper* course. Guo & Li (2015) adopted the need theory and constructed the framework of *Business English* teachers' TCs which encompassed four dimensions: professional attitude, professional knowledge, business knowledge, and professional skills. Duanmu et al. (2012) investigated more than 100 universities and administered questionnaires to teachers of the *English Newspaper* curriculum. They concluded after the quantitative research that teachers need badly improve their TCs by enhancing their media literacy as soon as possible and using the network to expand and update their knowledge.

3.4 College English Teachers' Core Teaching Competencies

Like EFL teachers' TCs, discussions about CE teachers' have always been intense in research methods involving theoretical, qualitative, quantitative, and mixed ones. For example, in a theoretical study, the CE teachers in Wenzhou city were suggested to be more enthusiastic in teaching, more engaged to enhance their communication ability, and more skilful in out-of-campus enterprises for practices, all of which can effectively improve CE teachers' competencies (Huang, 2015). Apart from professional knowledge, skills and attitude, CE teachers' competencies were put forward in another theoretical study involving knowledge about the trans-disciplines and how to be a research teacher as well (Zhao, 2002). In a quantitative study on 26 universities in Liaoning province, questionnaires administered to student and teacher participants indicated 5 dimensions of CE teachers' TCs: morality and ethnicity, love and dedication, professional knowledge and skills, research ability, and mental health (Zhang et al., 2003).

CE teachers' TCs have been discussed in particular curricula, too. CE teachers' TC model is mainly studied from the perspective of the *English for Special Purposes* curriculum (ESP) since non-English majors began to take the ESP class after finishing the mandatory CE class in their freshman year. With the proposal of establishing "first-class universities", "first-class disciplines", and "the Belt and Road Initiative" in China's higher institutions, English education has been stuck in a dilemma between the national requirements of cultivating internationally competitive students in various disciplines and the inadequate foreign language teaching quality (Cai, 2018).

Therefore, research on justifying the necessity of *ESP*, analyzing *ESP* teachers' competency framework, and elaborating the strategies for improving competency has never stopped. For example, Cai (2018) explored the factors resulting in the failure of ESP implementation from the perspective of social needs, theoretical grounds, pedagogical constraints and language education, advocating the establishment of appropriate *ESP* courses as soon as possible to reverse the decline in the importance of CE for non-English majors. In another research using structured interviews and questionnaires, the prototype of the TPACK (Technological Pedagogical Content Knowledge) competency framework for *ESP* teachers in Chinese universities was constructed after the confirmatory factor analysis. The *ESP* teachers' TPACK competency framework contained 7 factors and 21 variables (Xu et al., 2020), which echoes the division of language proficiency, professional knowledge, teaching skills, and professional morals in the dimensions of the EFL teachers' TC model.

Therefore, CE teachers' TCs were proposed to develop through TPACK competency which is still centred around knowledge, skills, morals, and language proficiency. Ample literature suggested strategies for developing CE teachers' TPACK competency from the environmental, institutional, teamwork, and personal dimensions (Chen, 2018; Fan & Zhang, 2016; Ren & Ren, 2015; Zhang et al., 2015). Regulations and rules of the government and universities would guarantee the teachers' opportunities to participate in pre-service and in-service teacher training (Feng & Tan, 2014; Wang, 2018). When trained either by individual effort or by teamwork like micro-teaching, creating an authentic disciplinary teaching environment was quite essential for the teachers' constructive learning (Fan & Zhang, 2016; C. Xu et al., 2018; Zhang et al., 2015). The integration of TPACK should be prioritized, instead of learning TK alone, under specific teaching and learning contexts with the teachers developing active learning instead of passive learning (Feng & Tan, 2014; Wang, 2018).

There existed some other themes related to CE teachers' TPACK besides the structure, the affecting factors, and the developing strategies of TPACK itself. Li Mingxi (2018) theoretically constructed the Learning Cloud Space of CE based on the TPACK framework and introduced its application in three CE teaching modes: flipped classroom, inquiry learning and mixed teaching mode. Wang Qi (2013) discussed the feasibility of teaching critical thinking in

the technological environment and also in theoretical research emphasizing that the construction process of CE teachers' TPACK is actually to optimize their capabilities of thinking critically when integrating technologies into teaching, and cultivating students' critical thinking in language teaching. These research findings would have been more convincing if the quantitative research method or mixed research method had been supplemented in the later studies.

Most of the empirical studies of CE teachers' TCs were studied through TPACK competency and the articles reviewed so far focused on China's more prosperous middle and eastern parts (He, 2015; Zhan & Yan, 2015; Zhang & Wang, 2000) where the educational resources were better and thus teachers were more knowledgeable technologically. Research on the western part of China is limited.

4. Discussion

From what has been reviewed in Table 2, it can be seen that the methods to construct the dimensions of university teachers' TC model are various. Generally, there exist five methods for the research to adopt: Behavioral Event Interview, Delphi method, analytic hierarchy process, questionnaire surveys and O* NET job analysis. It is suggested that at least two methods should be adopted to decide on the dimensions of university teachers' TC models.

As for the university teachers' core TCs, some researchers constructed the TC model from more than three dimensions (Niu & Zhang, 2012; Yang, 2021; Yao, 2008), and in most cases, they used the word "indicator" instead of "dimension". The wording of these indicators or dimensions may seem exotic from that of the general dimensions concluded in the study, but if closely examined, the core dimensions of university teachers' TCs fall into a minimum of three general dimensions which are found universally in various disciplines and subjects: professional teaching skills, professional knowledge, and personal traits. Here the dimension of personal traits comprises all the hidden competencies which cannot be discerned easily, like attitude, awareness, value, and self-development. etc. Under each dimension, some general elements can be concluded as well. Specifically, the skill dimension consists of elements like information gathering, creativeness, teaching reflection, and so on. The knowledge dimension consists of subject matter knowledge, teaching environment knowledge, teaching theories and so on. Also, the personal trait dimension consists of several elements. Table 3 shows the concluded university teachers' core TCs or the TC model of university teachers. The wording in different researchers may be different. For example, in the skill dimension, the element of teaching reflection became "reflection practice" in Farrell (2015), "reflective teaching practices" in Shu (2013), and "reflection" in Xi (2015).

Table 3. University Teachers' Core Teaching Competencies

Dimension	Element
Skills	Information gathering, creativeness, learning ability, self-development, teamwork, synthesizing and analyzing, providing and feedback, problem solving, forward thinking, empathic ability, conflict solving, communication skill, ability to influence others, logical thinking, adaptability, coaching skill, observation skill, quantitative analysis, teaching reflection
Knowledge	Knowledge of the subject matter, teaching environment, teaching organization, and teaching theories
Personal traits	Self-confidence, achievement motivation, independence, tendency to change, perseverance, self-control, responsibility, empathy

As for the EFL teachers' core TCs, studies have shown that reflective practice is the critical competency for effectiveness as a teacher, regardless of background. This has challenged the dichotomy between native and non-native English speaker teachers Farrell (2015). Other aspects of EFL teachers' TCs that have been studied include Information and Communication Technology competency, intercultural competency, and the global competency.

University teachers include all faculty members across various disciplines and subjects, while EFL teachers are specifically those lecturing the English language. Therefore, besides the dimensions and elements existing among all university teachers, English language proficiency was either listed exclusively as one dimension (Byram & Feng, 2005) or as one of the elements in the dimension "knowledge", "skill", or "value". For example, after reviewing foreign language teacher development at institutions of higher learning in the United States, Australia and the

European Union, Zhong and Wang (2016) proposed a three-dimension TC model which includes professional skills, professional knowledge, and professional development and English language knowledge just fell into the dimension of professional knowledge. Similarly, Chu et al. (2021) identified English language pedagogical content competence in EFL teachers' TCs based on the case study of three excellent EFL teachers. It is easy to conclude that EFL teachers' TCs in China are mostly constructed, based on the university teachers' TC model, in a minimum of three dimensions: teaching skills, professional knowledge, and personal traits. Some researchers may use different wording and phrasing to refer to these dimensions but they mean the same.

This review synthesized the EFL teachers' core TCs into three general dimensions shown in Figure 1. In teaching skills, there are elements including teaching design and implementation, teaching strategies, modern educational technology use, teaching reflection and innovation, research on teaching, assessment and evaluation. In professional knowledge, there is the English language and pedagogical knowledge. In personal traits, there are professional ethics, lifelong learning and self-development, and community learning. The knowledge element of the English language was bolded in the model to show the difference between the models of professional EFL teachers and general university teachers.
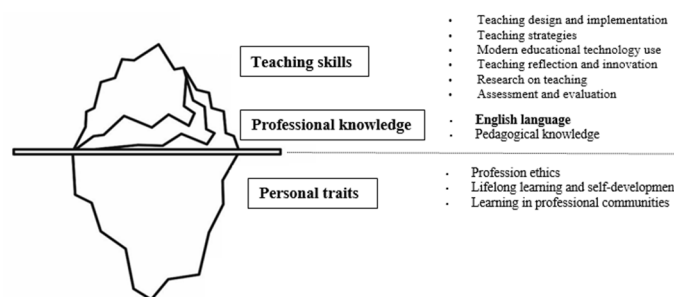

Figure 1. EFL Teachers' Core Teaching Competencies

As for CE teachers' core TCs, some differences from those of EFL teachers can be discerned. Lots of researchers noticed the importance of TPACK in CE teachers' TCs, which means besides English language knowledge, CE teachers need to have adequate transdisciplinary content knowledge related to students' disciplinary backgrounds. Here are the possible reasons.

CE teachers' TC in English language proficiency or knowledge is one of the solid foundations for their teaching practice, just like EFL teachers for the English majors. They are competent in language proficiency due to the fact that they have long been educated in the disciplines of Applied Linguistics, Foreign Literature, and Foreign Linguistics (Jiang & Wang, 2016). When they teach, they present a great profile of high-degree language skills, systematic linguistic knowledge, as well as some knowledge of English and American literature and culture (Zhang et al., 2021). However, CE teachers' students come from different disciplines whose major is not English language. CE teachers are supposed to communicate with their students in an academically familiar way by equipping themselves with content knowledge in their students' disciplines (Xu et al., 2020). Therefore what makes CE teachers' TCs distinguished is that CE teachers need to have content knowledge in students' disciplines besides what is needed in EFL teachers' TCs. Figure 2 shows the core dimensions of CE teachers' TCs. The three dimensions of knowledge, skills, and personal traits interact together making an inseparable whole in CE teachers' TC development. The elements of personal traits and skills in CE teachers' TCs stay almost the same as those in EFL teachers' TCs. The knowledge dimension, however, includes discipline content knowledge of students from various disciplines (as is bolded in Figure 2), besides English language knowledge (bolded as well) and pedagogical knowledge existing in EFL teachers' TCs.

Researchers have proposed several solutions to improve the TCs of university English teachers. Firstly, the education administration should provide opportunities for EFL and CE teachers to attend professional development workshops, which can enhance their overall TCs. At the same time, teachers themselves should take initiative to improve their TCs through continuous learning and on-the-job training (Zhong & Wang, 2016). Secondly, it is essential to cultivate the appropriate personal traits for university English teachers, which should be prioritized when developing their TCs. This requires the implementation of mechanisms for cultivating and assessing these traits, to ensure that EFL and CE teachers continuously improve their TCs over the course of their teaching career (Wu, 2005). Finally, university English teachers should cultivate a strong awareness of self-improvement, which can be achieved through reflective

practices such as observing other teachers' classes, keeping a teaching diary, watching teaching videos, and discussing with colleagues (Gu, 2007).
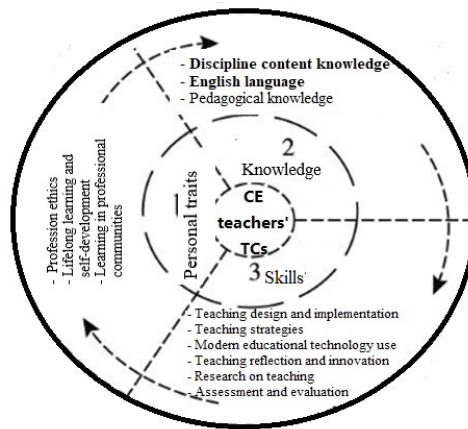

Figure 2. CE Teachers' Core Teaching Competencies

5. Conclusion

University English teachers' TCs are an important prerequisite for high-quality English education in China's higher institutions. This article reviewed relevant literature and answered four research questions. As for the first research question, the definitions of competency have fallen into three categories, some focusing on underlying personality traits, some on explicit behaviors, and some on functions. But the most recognized definition combined the three categories together suggesting that competency distinguished outstanding employees from ordinary ones and it involved some effectively measurable motivation, traits, self-concept, attitude, value, and knowledge as well as some identifiable behavioral demonstration of expertise (McClelland, 1998). Teaching competency, therefore, is a collection of the potential characteristics and abilities needed in teaching involving some effectively measurable motivation, traits, self-concept, attitude, value, and knowledge as well as some identifiable behavioral demonstration of expertise.

In answering research question No. 2 of what the dimensions of university teachers' TCs are, two orientations were found: skill orientation and quality orientation. In the skill orientation, university teachers' TCs included four domains: planning and preparation, instruction, professional responsibilities, and classroom environment. In the quality orientation, they included professional knowledge, skills, and values possessed by individual teachers to successfully implement the teaching. The quality orientation is more comprehensive than the skill orientation in constructing university teachers' TCs. The study concluded a minimum of three core dimensions of university teachers' TCs found universally in various disciplines and subjects: skills, knowledge, and personal traits.

As for research question No. 3, the study offered the core TC dimensions of EFL teachers based on those of university teachers by concluding that English language knowledge is necessary. Therefore, among the core dimensions of EFL teachers' TCs: teaching skills, professional knowledge, and personal traits, English language knowledge is emphasized as one of the elements in the knowledge dimension.

More interestingly, CE teachers need to have another competency besides what is needed in EFL teachers because content knowledge related to their students' disciplines helps to enhance students' English language learning. That means CE teachers' content knowledge in students' disciplines marks the difference in the core dimensions of TCs between EFL teachers and CE teachers. And that is the answer to research question NO.4.

Two categories of university English teachers are recommended to develop their TCs according to the particular TC models. EFL teachers should especially develop their competency in English language knowledge to meet English majors' higher and intensive language needs. However, for CE teachers, although they don't have to be as knowledgeable as EFL teachers in the English language, it would be more challenging for them since they are supposed to gain knowledge of students' discipline which they might not have learned before. It is suggested that CE teachers should be required to teach students from several same disciplines for years to get familiar with students' discipline content knowledge, for the sake of the CE teachers and students, rather than be transferred to teach

students from different disciplines every year.

Future work would be recommended to investigate university English teachers' TCs not only in China's developed areas like Wenzhou city (Huang, 2015) but also in other less developed areas, especially the southwestern part of China where higher education needs much improvement. Also, their TCs related to the currently heated educational issues can be explored, for example, TCs for deep learning, TCs for Ideological and Political Education, etc. Again, these studies can be implemented either among all university English teachers or among EFL teachers and CE teachers respectively.

It is of significant importance for the researchers to know about and compare the dimensions of university EFL teachers' and CE teachers' TCs. Since the TC dimensions of the two categories of university English teachers are slightly different, the English teachers, especially the novice teachers, can improve their TCs according to the core dimensions of either model developed in the study, and enhance their teaching practice more quickly, which is bound to make a significant influence on teachers' professional development (Xie, 2015). Students are thus cultivated to become 21st-century talents to transcend the language itself and become critical thinkers, real-life problem solvers, lifelong learners, etc. which helps speed up the training of applied talents for Chinese society to a certain extent. Besides, the core dimensions of TC models developed in the study can be used as a basis for education administrators to assess university English teachers' performance, optimize the faculty structure, and improve the competitiveness of university English teachers and even the university itself.

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